



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,791	08/17/2006	Michael Dankert	2003P12715WOU'S	3862
22116 7590 02/04/2009 SIEMENS CORPORATION INTELLECTUAL PROPERTY DEPARTMENT 170 WOOD AVENUE SOUTH ISELIN, NJ 08830				
EXAMINER DAVIS, OCTAVIA L				
ART UNIT 2855		PAPER NUMBER		
MAIL DATE 02/04/2009		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/589,791

Applicant(s)

DANKERT ET AL.

Examiner

OCTAVIA DAVIS

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-24, 26-31, 33, 34, 36-39 and 42-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruce et al (6,686,060) in view of Mansky et al (6,668,230), Yokoyama et al (5,831,299), Stanley et al (3,733,887) and Ogawa (4,794,797).

Regarding claim 41, Bruce et al disclose a thermal barrier coating material comprising a turbine component or blade 10, a super alloy substrate 22, a bond coat 24 arranged on the substrate, an MCrAlX layer that is an aluminum platinum and oxide material (See Col. 3, lines 29 – 36 and 47 – 55), measuring, re-measuring and recording a material parameter (See Col. 5, lines 25 – 28 and 44 – 47) but does not disclose measuring electrical capacitance, heat capacity, peltier coefficient, magnetic susceptibility, ferroelectricity and pyroelectricity. However, Mansky et al disclose a computer readable medium for performing sensor array based materials characterization comprising measuring the heat capacity of materials (See Col. 20, lines 37 – 39), measuring electrical properties of materials (See Col. 59, lines 51 – 61), and measuring magnetic properties of the material (See Col. 54, lines 46 - 51, wherein each measurement is performed numerous times (See Col. 20, lines 25 – 33 and Col. 24, lines 12 – 25). Yokoyama et al disclose a thin ferroelectric film element comprising means for measuring the ferroelectric properties of a material numerous times (See Col. 9, lines 55 - 66). Stanley et al disclose a method and apparatus for measuring the thermal conductivity and

thermoelectric properties comprising means for measuring the peltier coefficient in materials by using the peltier method and using the peltier effect to establish temperature difference across materials (See Col. 2, lines 56 – 63). Ogawa discloses a method of non-destructively detecting structural abnormality of a substance comprising measuring and detecting pyroelectricity in a material substance numerous times (See Col. 9, lines 1 – 10, 27 – 31 and 58 – 67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bruce et al according to the teachings of Mansky et al, Yokoyama et al, Stanley et al and Ogawa for the purposes of, advantageously providing a computer program for enabling a processor in a computer system to analyze one or more material properties (See Mansky et al, Col. 60, lines 44 - 48), advantageously providing a thin film material in which a sufficiently high spontaneous residual polarization and a sufficiently low coercive field are achieved at an annealing temperature lower than that by conventional methods (See Yokoyama et al, Col. 4, lines 10 - 15), advantageously providing an improved method and apparatus for determining the properties of thermo electric materials by measuring peltier and electrical properties (See Stanley et al, Col. 3, lines 17 – 24) and accurately locating and identifying the degree of structural abnormality resulting from stresses caused by various external forces in a structure (See Ogawa, Col. 9, lines 51 - 59).

Allowable Subject Matter

3. Claims 22 – 24, 26 – 31, 33, 34, 36 – 39 and 42 – 45 are allowed. The following is an examiner's statement of reasons for allowance: The primary reasons for allowance is that there cannot be ascertained prior art that anticipates or makes obvious the provisions of "the material parameter is selected from the group consisting of electrical capacitance, specific heat capacity, peltier coefficient, magnetic susceptibility, ferroelectricity and pyroelectricity and comparing the plurality of measurements for a change in material parameter.." in combination with the other

limitations presented in claim 22.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Octavia Davis whose telephone number is 571-272-2176. The examiner can normally be reached on Mon through Thurs from 9 to 5. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harshad Patel, can be reached on 571-272-2187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Harshad Patel/
Primary Examiner, Art Unit 2855

OD/2855
1/28/09